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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/433,257	11/04/1999	YEVGENIY EUGENE SHTEYN	PHA-23.782	2314

7590 08/20/2002

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EXAMINER

LIN, WEN TAI

ART UNIT	PAPER NUMBER
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2154

DATE MAILED: 08/20/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/433,257

Applicant(s)

SHTEYN, YEVGENIY EUGENE

Examiner

Wen-Tai Lin

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 December 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 February 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2&5. 6) ☒ Other: Official note on Hyperlinks.

DETAILED ACTION

1. Claims 1-13 are presented for examination.
2. Applicant is reminded to update the five referenced US applications on pages 6-7 with appropriate status (e.g., patented or abandoned), application series numbers and/or patent numbers when they are available.
3. The disclosure is objected to because it contains an embedded hyperlink and/or other form of browser-executable code. Applicant is required to delete the embedded hyperlink and/or other form of browser-executable code. See MPEP § 608.01. For example, hyperlinks are found in Specification page 5 and IDS (paper #2).
4. Claims 1 – 13 are objected to under 35 U.S.C. 112 second paragraph for being unclear in the phrases “enabling the client to ...” (in claims 1-10) and “the device is capable of ...” (in claims 11-13) because they do not refer to any functional or structural supports. For purpose of prior art rejection, these two phrases are being construed as “providing means for the client to ...” and “the device comprises means of ...” respectively.

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5. Claims 9 and 12-13 are objected to because of the following issues/informalities:

(i) As to claim 9, it is not clearly understood what is being organized as "linked list" [i.e., there must exist a plurality of data blocks/elements in order to make good use of the link listed data structure. However, it is unclear whether this is a data structure for organizing data at the information provider or the distributing buffers?].

(ii) As to claim 12, line 2, it appears that "the content information" is a typo of "the information content"; the latter has an antecedent basis from its base claim.

(iii) As to claim 13, line 2, it is not clearly understood what is meant by "the control information comprises an XML format" [i.e., "the control information is coded in XML format"?].

Clarification/correction in response to this office action is required.

Claim Rejections - 35 USC § 101

6. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

7. Claims 7-10 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Specifically, the claimed electronic file appears to be a collection of segmented data, wherein each segment is marked with control information (such as pointers) for downloading, buffering and playing out. In other words, the claim language does not render the claimed electronic file statutory because

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an electronic file comprising control information is not necessarily equivalent to a computer-readable medium having executable instructions for carrying out intended operations.

Claim Rejections - 35 USC § 102

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1, 4-5, 7 and 11-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Gelman et al. (hereafter "Gelman") [U.S. Pat. No. 5371532].

9. As to claim 1, Gelman taught the invention as claimed including a method of emulating streaming of a file over a data network to a client [90, 91, 70, Fig.3; note that since a subscriber has direct link (such as ADSL transmission line) to the central office (CO) controlling access of the shared buffers, the subscriber's CPE together with its shared CO buffers is being construed as a client unit having data buffering and playing out capabilities], the method comprising:

- partitioning the file into multiple segments [Abstract, lines 1-6; col.8, lines 59-63];
- providing means for the client to download a first one of the segments for playing out [col.11, lines 62-68];
- providing means for the client to download a next one of the segments while playing out a current one of the segments [col.12, lines 19-26];

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- providing means for the client to buffer the next segment while playing out the current segment; and
- providing means for the client to start playing out the buffered next segment upon completion of the playing out of the current segment.

[col.8, line 63 – col.9, line 6; 403, 404, Fig.4; i.e., with the ping-pong buffering pair at the central office, Gelman's client unit is able to perform data streaming by downloading a current segment and playing out a previously downloaded segment in parallel].

10. As to claims 4-5, Gelman taught that the file comprises an audio file or a video file [col.4, line 65 –col.5, line 6].

11. As to claims 7 and 11, since all the limitations in these claims can also be found in claim 1, they are rejected for the same reasons set forth in the rejection of claim 1 above.

12. As to claim 12, Gelman further taught that the information content is accessible through control information [i.e., a script] provided to the device [col.9, lines 7-25; col.11, lines 28-31]; and the device is capable of interpreting the control information to retrieve the segments from the server for sequential play-out [i.e., the script is interpreted by the script processor].

Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

- (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. Claims 2-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gelman et al. [U.S. Pat. 5371532].

15. As to claims 2, Gelman did not specifically teach that the partitioning is determined by information about the client.

However, it is well known that, under the notion of data streaming, the size of a segment must not exceed the size of the buffer at the client's side. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to determine the size of each partitioned segment based on the client's buffering capability, so as to avoid loss of data due to incompatible buffers.

16. As to claims 3, Gelman did not specifically teach that the partitioning is determined by information about the network.

However, it is well known that, under the notion of playing out in real time, the data flowing into the client's play-out unit has to be maintained at certain constant rate.

On the other hand, it is also well known that the network congestion level may vary from time to time. Thus, in order to supply a constant data flow at the client's end, a larger buffer tends to smooth out the fluctuation in the network's traffic. Based on these well-known facts, it would have been obvious to one of ordinary skill in the art at the time the invention was made to determine the size of each partitioned segment based on the fluctuation in the network's traffic, so as to maintain the data flowing at a constant, real-time rate at the client's end.

17. Claims 6 and 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gelman et al. [U.S. Pat. 5371532], as applied to claims 1, 2-5, 7 and 11 above, further in view of Cohen [U.S. Pat. No. 5751968].

18. Cohen is cited from applicant's IDS filed on 12/12/2001.

19. As to claim 6, Gelman did not specifically teach adding tag to each of the segments.

However, Cohen taught that each data segment is formed as a data file [Abstract, lines 5-6] and, as illustrated in Fig.3, each data file is tagged with an ID for the purpose of distinguishing one from the other in a streaming sequence [col.5, lines 55-62]. Since the buffers at the central office of Gelman's system may simultaneously receive different sources of data [col.6, lines 12-16], it is obvious that the buffers at each

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central office must be shared and able to sort out the data segments belonging to different data streams.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Gelman and Cohen by tagging each of Gelman's data segments with appropriate sequence ID, so that the buffers at the central offices could handle multiple data streams of different sources.

20. As to claim 8, Gelman in view of Cohen further taught that each of the segment comprises respective control information [col.9, lines 17-25; e.g., each information segment is associated with a tag serving as play-out sequence by a controlling processor].

21. As to claim 9, Gelman in view of Cohen did not specifically teach using linked list data structure in the buffers.

However, it is well known that with linked list data structure an ordered data elements/blocks do not have to occupy a contiguous memory space. Since Gelman in view of Cohen's system has to handle multiple data streams simultaneously, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have adopted the linked list structure in the buffer memory, thereby allowing each data segment sequentially entering the buffer according to its time of arrival, while playing out according to the linked list sequence.

22. Claims 10 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gelman et al. [U.S. Pat. 5371532], as applied to claims 1-9 and 11-12 above, further in view of Girardot et al. (hereafter "Girardot") [XP-002160596, IEEE Conf. On Multimedia and Expo., 2000].

23. Girardot was cited in Applicant's IDS filed on 12/12/2001.

24. As to claims 10 and 13, Gelman did not specifically teach that the control information is coded in XML format and that the client device has an XML parser and interpreter.

However, Gelman taught that the control information is coded as a script [col.13, line 60 – col.14, line 8]. Girardot taught that, for streaming purpose, the control flow of multimedia data can be coded in XML format [Abstract], which requires a parser and interpreter for implementing the data streaming.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Gelman and Girardot by replacing Gelman's script with Girardot's XML for implementing the data streaming because the structured nature of XML is well suited for fragmenting and reordering of information flow [Section 1, paragraphs 1 and 2] and the needed parser and interpreter are widely supported (e.g., they are available from the Internet).

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25. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Geagan et al. [U.S. Pat. No. 6263371]; and

Hooper et al. [U.S. Pat. No. 5442390], disclosed systems and methods for streaming data in a network environment.

26. A shortened statutory period for response to this action is set to expire **3 (three) months and 0 days** from the mail date of this letter. Failure to respond within the period for response will result in **ABANDONMENT** of the application (see 35 U.S.C. 133, M.P.E.P. 710.02, 710.02(b)).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wen-Tai Lin whose telephone number is (703)305-4875. The examiner can normally be reached on Monday-Friday(8:00-5:00) .

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on (703)305-9678. The fax phone numbers for the organization where this application or proceeding is assigned are as follows:

(703)746-7239 for official communications;

(703)746-7238 for after final communications; and

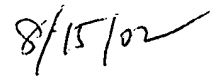
(703)746-7240 for status inquiries draft communication.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-3900.

Wen-Tai Lin

August 15, 2002

A handwritten signature in cursive script, appearing to read "Wen-Tai Lin".A handwritten date "8/15/02" with a checkmark at the end.